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KASRAIAN, ALLAHYAR	
ART UNIT	**PAPER NUMBER**
2617	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/615,471	TSIEN ET AL.	
	Examiner	Art Unit	
	ALLAHYAR KASRAIAN	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7,9-13,16,17 and 20-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-7,9-13,16,17 and 20-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. The present Office Action is based upon the Applicant's amendment filed on Nov. 18, 2009. **Claims 1, 3-7, 9-13, 16, 17 and 20-22** are now pending in the present application. **This Action is made FINAL**.

Response to Arguments

2. Applicant's arguments filed on Nov. 18, 2009 have been fully considered but they are not persuasive.

Applicant argues and repeats the same arguments as submitted on June, 06, 2009. Therefore, Examiner refers to the same response to arguments as provided on non-final Office Action (mailed to Applicant on Aug. 18, 2009). Applicant fails to provide a response to Examiner's "Response to Arguments" in the previous Office Action.

In response to applicant's argument that Frixon is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). Applicant argues that the applied references for rejection the claims 1, 7, 13, and 17 under 35 U.S.C § 103(a) are non-analogous arts that each reference teaches away from the combination. Examiner respectfully disagrees with Applicant since each of the references (Koohgoli, Frixon, Lopez, Choi) individually relates to selecting carrier frequencies (or transmission channels). Examiner relies on the method of selecting channel frequency disclosed by the references disregarding whether the type of signal is video,

voice, or data, and disregarding if the transmission happens at the video camera, base station, mobile station, or by any device operating in certain band of frequency. The point is how to select a carrier frequency (or transmission channel) to transmit a signal(s).

The Applicant's arguments on page 10 with respect to claim 6, where Applicant argues, "Applicants respectfully submit that in disregarding FIG. 2 of Lopez the Office Action is changing the principle of operation of Lopez and this application of Lopez cannot support the rejection. The Office Action states that '[a]pplicant should consider the references as a whole.' Applicants respectfully submit that in disregarding what Lopez shows in FIG. 2 to arrive at the rejection the Office Action is not considering Lopez as a whole", is respectfully traversed for the same reason provided on the last Office Action. Examiner believes, Lopez clearly discloses the limitation, "determining whether a collision is detected at the channel selected in said selecting, and, if a collision is detected, selecting a new channel" (see the summary of the invention in lines 46-67 of column 1 and lines 1-3 of column 2 of Lopez). However, the part 'executing the method again at said scanning' would be disclosed by combining Lopez with the Koohgoli in view of Frixon. Applicant should consider the references as a whole. Examiner relies on the description disclosed by Lopez for disclosing the limitations of claim 6. Applicant should consider all the teachings of Lopez (as a whole) for disclosing the limitation, and not focusing only on a particular part of the reference.

On page 13 of the Applicant's arguments/remarks with regards to claim 12, Applicant's argument is not persuasive since the argument(s) is similar to the argument as provided for claim 6. Therefore, Examiner refers to the same reason(s) stated above for rejection claim 6.

In response to Applicant's arguments against the references individually, one cannot

show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant(s) are remained that the Examiner is entitled to give the broadest reasonable interpretation to the language of the claim. The Examiner is not limited to Applicant's definition, which is not specifically set fourth in the claims, *In re Tanaka et al.* 193 USPQ 139, (CCPA) 1977.

The references made herein are done so for the convenience of the Applicant. They are not meant to be limiting and should be considered as a whole.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 21and 22** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is nothing the description part of current Application to disclose, "scanning includes scanning available channels *to detect radar signals*; said indicating includes indicating *the channel as occupied by a radar system*, otherwise indicating the channel as available; and said selecting includes selecting a channel from a channel indicated as available within the larger gap at a higher frequency *to reduce interference with the radar system*".

Applicant is welcomed to point out where in the description part of the current Application discloses that limitation.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. **Claims 1 and 3-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Koohgoli et al. (U.S. Patent # 5,276,908) (hereafter Koohgoli) in view of **Frixon (U.S. Patent # 5,138,456)**.

Consider **claim 1**, Koohgoli discloses a method, comprising:

scanning available channels (FIG. 3a, 3b and lines 3-5 of column 7 where it says, "In operation, when a call set-up is attempted between the base station 30a and the subscriber terminal 30b, all available traffic channels are scanned.");

measuring a received signal power level for the channels scanned in said scanning (FIGS. 3a, 3b, 4a and 4b, lines 3-5 of col. 7);

comparing the measured received signal power level to a threshold value to provide a difference (col. 7 lines 5-26);

if the difference is greater than a predetermined value, then indicating the channel as occupied, otherwise indicating the channel as available (col. 7 lines 5-26);

However, Koohgoli fails to disclose determining a larger gap between available channels; and selecting a channel within the larger gap.

In the same field of endeavor, Frixon discloses determining a larger gap between available channels; and selecting a channel within the larger gap (col. 4 lines 38-44).

Therefore, it would have been obvious to a person or ordinary skills in the art at the time the invention was made to incorporate channel selection by choosing a channel(s) within larger frequency spacing between available channels as taught by Frixon to the channel selecting method and apparatus shown by Koohgoli disclosed for purpose of reducing and preventing interference by selecting a channel having a distance from its neighboring channels to provide a

guard band between frequency channels.

Consider **claim 3 as applied to claim 1 above**, Frixon discloses said selecting includes selecting a channel at a midpoint within the larger gap (col. 4 lines 38-44).

Consider **claim 4 as applied to claim 1 above**, Koohgoli as modified by Frixon disclose the claimed invention except in the event there are two or more larger gaps, selecting a larger gap at a higher frequency, wherein said selecting includes selecting a channel within the larger gap at a higher frequency.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to select a channel at higher frequency when there are two or more larger gaps presented. One of ordinary skill in the art would have expected applicant's invention to perform equally well with either selecting a channel at higher frequency or lower frequency when there are two or more larger gaps between channels presented because choosing either higher and lower frequency is a matter of Design Choice for the channels within close range of frequencies. Furthermore, applicant has not disclosed that selecting a channel at higher frequency provides an advantage, is used for a particular purpose, or solves a stated problem.

Consider **claim 5 as applied to claim 1 above**, Koohgoli as modified by Frixon disclose the claimed invention except in the event there are two or more larger gaps, selecting a larger gap at a higher frequency, wherein said selecting includes selecting a channel within a midpoint of the larger gap at a higher frequency.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to select a channel within a midpoint of the larger gap at a higher frequency when there are two or more larger gaps presented. One of ordinary skill in the art would have expected applicant's invention to perform equally well with either selecting a channel within midpoint of the larger gap at higher frequency or lower frequency when there are two or more larger gaps between channels presented because choosing either higher and lower frequency is a matter of Design Choice for the channels with close range of frequencies. Furthermore, applicant has not disclosed that selecting a channel at higher frequency provides an advantage, is used for a particular purpose, or solves a stated problem.

8. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Koohgoli et al. (U.S. Patent # 5,276,908)** (hereafter Koohgoli) in view of **Frixon (U.S. Patent # 5,138,456)** further in view of **Lopez (U.S. Patent # 7,177,291 B1)**.

Consider **claim 6 as applied to claim 1 above**, Koohgoli as modified by Frixon disclose the claim invention except determining whether a collision is detected at the channel selected in said selecting, and, if a collision is detected, selecting a new channel by executing the method again at said scanning.

In the same field of endeavor, Lopez clearly shows and discloses a method and apparatus for determining collision when selecting a channel, and in case of detecting collision in the selected channel, requesting a new channel and suggesting a new transmission channel (see the summary of the invention in lines 46-67 of column 1 and lines 1-3 of column 2 where it

particularly says, "in case of collision, transmission of a change of channel request to the first network…the change of channel request comprises…an identifier of…the number of times that request has been sent, a suggestion of transmission channel for the first network").

Therefore, it would have been obvious to a person with the ordinary skills in the art to combine the method and apparatus for detecting a collision in a selected channel and then requesting a new channel as taught by Lopez with the channel scanning and selection method suggested by Koohgoli as modified by Frixon for purpose of transmitting data or signal on the best pre-examined available carrier channel. The proper motivation is to manage frequency channel resources.

9. **Claims 7 and 9-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Choi et al. (U.S. Patent # 7,206,840 B2)** (hereafter Choi) in view of **Frixon (U.S. Patent # 5,138,456)**.

Consider **claim 7**, Choi discloses an article comprising a storage medium having stored thereon instructions that, when executed by a computing platform, result in dynamic frequency selection in a wireless local area network by (FIG. 2, abstract, lines 64-67 of col. 3, and lines 7-12 of col. 4):

scanning available channels (FIG. 3 step 100: monitoring of channels; col. 4 lines 16-39);

measuring a received signal power level for the channels scanned in said scanning (abstract and col. 4 lines 40-67);

comparing the measured received signal power level to a threshold value to provide a

difference (col. 6 lines 28-35 for threshold value -82dBm);

if the difference is greater than a predetermined value, then indicating the channel as occupied (lines 23-34 of col. 6 where it says, "the measurement of noise or interference level by 802.11 non-compliant devices…is detected and reported to the AP… The STA shall keep track of the CCA busy periods in order to report back the fractional period during which the CCA was busy out of the whole measurement duration."), otherwise indicating the channel as available (see FIG. 3 step 200: Selecting a New Channel By AP, and lines 11-13 of abstract where it says, "selecting one of the candidate channels based on the channel quality report for use in communication between the AP and the plurality of STAs");

However, Choi fails to disclose determining a larger gap between available channels; and selecting a channel within the larger gap.

In the same field of endeavor, Frixon discloses determining a larger gap between available channels; and selecting a channel within the larger gap (col. 4 lines 38-44).

Therefore, it would have been obvious to a person or ordinary skills in the art at the time the invention was made to incorporate channel selection by choosing a channel(s) within larger frequency spacing between available channels as taught by Frixon to the channel selecting method and apparatus shown by Choi disclosed for purpose of reducing and preventing interference by selecting a channel having a distance from its neighboring channels to provide a guard band between frequency channels.

Consider **claim 9 as applied to claim 7 above**, Frixon discloses said selecting includes selecting a channel at a midpoint within the larger gap (col. 4 lines 38-44).

Consider **claim 10 as applied to claim 7 above**, Choi as modified by Frixon disclose the claimed invention except in the event there are two or more larger gaps, selecting a larger gap at a higher frequency, wherein said selecting includes selecting a channel within the larger gap at a higher frequency.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to select a channel at higher frequency when there are two or more larger gaps presented. One of ordinary skill in the art, would have expected applicant's invention to perform equally well with either selecting a channel at higher frequency or lower frequency when there are two or more larger gaps between channels presented because choosing either higher and lower frequency is a matter of Design Choice for the channels within close range of frequencies. Furthermore, applicant has not disclosed that selecting a channel at higher frequency provides an advantage, is used for a particular purpose, or solves a stated problem.

Consider **claim 11 as applied to claim 7 above**, Choi as modified by Frixon disclose the claimed invention except in the event there are two or more larger gaps, selecting a larger gap at a higher frequency, wherein said selecting includes selecting a channel within a midpoint of the larger gap at a higher frequency.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to select a channel within a midpoint of the larger gap at a higher frequency when there are two or more larger gaps presented. One of ordinary skill in the art would have expected Applicant's invention to perform equally well with either selecting a channel within midpoint of the larger gap at higher frequency or lower frequency when there are two or more larger gaps

between channels presented because choosing either higher and lower frequency is the matter of design choice for the channels within close range of frequencies. Furthermore, applicant has not disclosed that selecting a channel at higher frequency provides an advantage, is used for a particular purpose, or solves a stated problem.

10. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Choi et al. (U.S. Patent # 7,206,840 B2)** (hereafter Choi) in view of **Frixon (U.S. Patent # 5,138,456)** further in view of **Lopez (U.S. Patent # 7,177,291 B1)**.

Consider **claim 12 as applied to claim 7 above**, Choi as modified by Frixon disclosed the claim invention except determining whether a collision is detected at the channel selected in said selecting, and, if a collision is detected, selecting a new channel by executing the method again at said scanning.

In the same field of endeavor, Lopez clearly shows and discloses a method and apparatus for determining collision when selecting a channel, and in case of detecting collision in the selected channel, requesting a new channel and suggesting a new transmission channel (see the summary of the invention in lines 46-67 of column 1 and lines 1-3 of column 2 where it particularly says, "in case of collision, transmission of a change of channel request to the first network…the change of channel request comprises…an identifier of…the number of times that request has been sent, a suggestion of transmission channel for the first network").

Therefore, it would have been obvious to a person with the ordinary skills in the art to combine the method and apparatus for detecting a collision in a selected channel and then requesting a new channel as taught by Lopez with the channel scanning and selection method

suggested by Koohgoli as modified by Frixon for purpose of transmitting data or signal on the best pre-examined available carrier channel. The proper motivation is to manage frequency channel resources.

11. **Claims 13 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Choi et al. (U.S. Patent # 7,206,840)** (hereafter Choi) in view of **Sugar et al. (U.S. Patent # 7,248,604 B2)** (hereafter Sugar) further in view of **Frixon (U.S. Patent # 5,138,456)**.

Consider **claim 13**, Choi clearly shows and disclose an apparatus comprising:

a transceiver (see FIG. 2 transmitter/receiver 24); and

a baseband processor (considered as CPU), wherein is capable of dynamically selecting a frequency on which to communicate via said transceiver on a wireless local area network (FIG. 2 and lines 64-67 of column 3 where it says, "Both the AP and STA may include … a CPU 22, a transmitter/receiver 24, … a random access memory (RAM) 30, a read-only memory (32)", and lines 7-12 of column 4 where it says, "The CPU 22 operates under the control of an operating system contained in the ROM 32 and utilizes RAM 30 to perform the frequency selection within a wireless local area network (WLAN), by enabling the AP to provide a new channel or wireless link for all stations (STAs) associated with its BSS.") by:

scanning available channels (FIG. 3 step 100: monitoring of channels; col. 4 lines 16-39);

measuring a received signal power level for the channels scanned in said scanning (abstract and col. 4 lines 40-67);

comparing the measured received signal power level to a threshold value to provide a difference (col. 6 lines 28-35 for threshold value -82dBm);

if the difference is greater than a predetermined value, then indicating the channel as occupied (lines 23-34 of col. 6 where it says, "the measurement of noise or interference level by 802.11 non-compliant devices…is detected and reported to the AP… The STA shall keep track of the CCA busy periods in order to report back the fractional period during which the CCA was busy out of the whole measurement duration."), otherwise indicating the channel as available (see FIG. 3 step 200: Selecting a New Channel By AP, and lines 11-13 of abstract where it says, "selecting one of the candidate channels based on the channel quality report for use in communication between the AP and the plurality of STAs");

However, Choi fails to disclose explicitly the CPU is a baseband processor or include a baseband processor.

In the same field of endeavor, Sugar clearly show and disclose an apparatus comprising a transceiver; and a baseband processor to couple to said transceiver (see FIG. 3 and lines 50-62 of col. 3)

Therefore, it would have been obvious to a person with the ordinary skills in the art to include a baseband processor in wireless communications apparatus taught by Sugar in the CPU of wireless apparatus disclosed by Choi for purpose of choosing wireless channels and processing the baseband signals in a wireless network.

However, Choi as modified by Sugar fail to disclose determining a larger gap between available channels; and selecting a channel within the larger gap.

In the same field of endeavor, Frixon discloses determining a larger gap between

available channels; and selecting a channel within the larger gap (col. 4 lines 38-44).

Therefore, it would have been obvious to a person or ordinary skills in the art at the time the invention was made to incorporate channel selection by choosing a channel(s) within larger frequency spacing between available channels as taught by Frixon to the channel selecting method and apparatus shown by Choi as modified by Sugar for purpose of reducing and preventing interference by selecting a channel having a distance from its neighboring channels to provide a guard band between frequency channels.

However, Choi as modified by Sugar and further modified by Frixon fail to disclose in the event there are two or more larger gaps, selecting a larger gap at a higher frequency; and selecting a channel from a channel indicated as available within the larger gap at a higher frequency.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to select a channel at higher frequency when there are two or more larger gaps presented. One of ordinary skill in the art, would have expected applicant's invention to perform equally well with either selecting a channel at higher frequency or lower frequency when there are two or more larger gaps between channels presented because choosing either higher and lower frequency is a matter of Design Choice for the channels within close range of frequencies. Furthermore, applicant has not disclosed that selecting a channel at higher frequency provides an advantage, is used for a particular purpose, or solves a stated problem.

Consider **claim 16 as applied to claim 13 above**, Choi as modified by Sugar further modified by Frixon disclosed said baseband processor is further capable of dynamically selecting

a frequency on which to communicate via said transceiver by determining a larger gap between available channels (see Frixon, col. 4 lines 38-44).

However, Choi as modified by Sugar further modified by Frixon fails to disclose in the event there are two or more larger gaps, selecting a larger gap at a higher frequency, wherein said selecting includes selecting a channel within the larger gap at a higher frequency and wherein said selecting includes selecting a channel within a
midpoint of the larger gap at a higher frequency.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to select a channel at higher frequency when there are two or more larger gaps presented. One of ordinary skill in the art, would have expected applicant's invention to perform equally well with either selecting a channel at higher frequency or lower frequency when there are two or more larger gaps between channels presented, or selecting a channel within midpoint of the larger gap at higher frequency or lower frequency when there are two or more larger gaps between channels presented because choosing either higher and lower frequency is a matter of Design Choice for the channels within close range of frequencies. Furthermore, applicant has not disclosed that selecting a channel at higher frequency provides an advantage, is used for a particular purpose, or solves a stated problem.

12. **Claims 17 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Choi et al. (U.S. Patent # 7,206,840)** (hereafter Choi) in view of **Sugar et al. (U.S. Patent # 7,248,604 B2)** (hereafter Sugar) further in view of **Pope, Jr. et al. (U.S. Patent # 6,654,616 B1)** (hereafter Pope) and further in view of **Frixon (U.S. Patent # 5,138,456)**.

Consider **claim 17**, Choi clearly shows and disclose an apparatus comprising:

a transceiver (see FIG. 2 transmitter/receiver 24); and

a baseband processor (considered as CPU) wherein is capable of dynamically selecting a frequency on which to communicate via said transceiver on a wireless local area network (FIG. 2 and lines 64-67 of column 3 where it says, "Both the AP and STA may include … a CPU 22, a transmitter/receiver 24, … a random access memory (RAM) 30, a read-only memory (32)", and lines 7-12 of column 4 where it says, "The CPU 22 operates under the control of an operating system contained in the ROM 32 and utilizes RAM 30 to perform the frequency selection within a wireless local area network (WLAN), by enabling the AP to provide a new channel or wireless link for all stations (STAs) associated with its BSS.") by:

scanning available channels (FIG. 3 step 100: monitoring of channels; col. 4 lines 16-39);

measuring a received signal power level for the channels scanned in said scanning (abstract and col. 4 lines 40-67);

comparing the measured received signal power level to a threshold value to provide a difference (col. 6 lines 28-35 for threshold value -82dBm);

if the difference is greater than a predetermined value, then indicating the channel as occupied (lines 23-34 of col. 6 where it says, "the measurement of noise or interference level by 802.11 non-compliant devices…is detected and reported to the AP… The STA shall keep track of the CCA busy periods in order to report back the fractional period during which the CCA was busy out of the whole measurement duration."), otherwise indicating the channel as available (see FIG. 3 step 200: Selecting a New Channel By AP, and lines 11-13 of abstract where it says, "selecting one of the candidate channels based on the channel quality report for use in

communication between the AP and the plurality of STAs");

However, Choi fails to disclose explicitly the CPU is a baseband processor or include a baseband processor.

In the same field of endeavor, Sugar clearly show and disclose an apparatus comprising a transceiver; and a baseband processor to couple to said transceiver (see FIG. 3 and lines 50-62 of col. 3)

Therefore, it would have been obvious to a person with the ordinary skills in the art to include a baseband processor in wireless communications apparatus taught by Sugar in the CPU of wireless apparatus disclosed by Choi for purpose of choosing wireless channels and processing the baseband signals in a wireless network.

However, Choi as modified by Sugar fail to disclose the apparatus comprises an omnidirectional antenna.

In the same field of endeavor, Pope clearly shows and discloses an omnidirectional antenna with a wireless local area transceiver (FIG. 1, FIG. 2 and lines 29-36 of col. 4)

Therefore, it would have been obvious to a person with ordinary skills in the art to include an omnidirectional antenna as taught by Pope to the wireless local area network method and apparatus as displayed by Choi as modified by Sugar for purpose of transmitting/receiving signal with a better SNR gain in a wireless communication
network. The proper motivation is to select the optimum frequency channels.

However, Choi as modified by Sugar and further modified by Pope fail to disclose determining a larger gap between available channels; and selecting a channel within the larger gap.

In the same field of endeavor, Frixon discloses determining a larger gap between available channels; and selecting a channel within the larger gap (col. 4 lines 38-44).

Therefore, it would have been obvious to a person or ordinary skills in the art at the time the invention was made to incorporate channel selection by choosing a channel(s) within larger frequency spacing between available channels as taught by Frixon to the channel selecting method and apparatus shown by Choi as modified by Sugar and further modified by Pope for purpose of reducing and preventing interference by selecting a channel having a distance from its neighboring channels to provide a guard band between frequency channels.

However, Choi as modified by Sugar modified by Pope and further modified by Frixon fail to disclose in the event there are two or more larger gaps, selecting a larger gap at a higher frequency; and selecting a channel from a channel indicated as available within the larger gap at a higher frequency.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to select a channel at higher frequency when there are two or more larger gaps presented. One of ordinary skill in the art, would have expected applicant's invention to perform equally well with either selecting a channel at higher frequency or lower frequency when there are two or more larger gaps between channels presented because choosing either higher and lower frequency is a matter of Design Choice for the channels within close range of frequencies. Furthermore, applicant has not disclosed that selecting a channel at higher frequency provides an advantage, is used for a particular purpose, or solves a stated problem.

Consider **claim 20 as applied to claim 17 above**, Choi as modified by Sugar modified by

Pope and further modified by Frixon disclosed said baseband processor is further capable of dynamically selecting a frequency on which to communicate via said transceiver by determining a larger gap between available channels (see Frixon, col. 4 lines 38-44).

However, Choi as modified by Sugar modified by Pope and further modified by Frixon fails to disclose in the event there are two or more larger gaps, selecting a larger gap at a higher frequency, wherein said selecting includes selecting a channel within the larger gap at a higher frequency and wherein said selecting includes selecting a channel within a midpoint of the larger gap at a higher frequency.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to select a channel at higher frequency when there are two or more larger gaps presented. One of ordinary skill in the art, would have expected applicant's invention to perform equally well with either selecting a channel at higher frequency or lower frequency when there are two or more larger gaps between channels presented, or selecting a channel within midpoint of the larger gap at higher frequency or lower frequency when there are two or more larger gaps between channels presented because choosing either higher and lower frequency is a matter of Design Choice for the channels within close range of frequencies. Furthermore, applicant has not disclosed that selecting a channel at higher frequency provides an advantage, is used for a particular purpose, or solves a stated problem.

13. **Claim 21** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Koohgoli et al. (U.S. Patent # 5,276,908)** (hereafter Koohgoli) in view of **Frixon (U.S. Patent # 5,138,456)** further in view of **Applicant Admitted Prior Art (Background of the Invention)**.

Consider **claim 21 as applied to claim 1 above**, Koohgoli as modified by Frixon discloses the claimed invention except said scanning includes scanning available channels to detect radar signals; said indicating includes indicating the channel as occupied by a radar system, otherwise indicating the channel as available; and said selecting includes selecting a channel from a channel indicated as available within the larger gap at a higher frequency to reduce interference with the radar system.

In the same field of endeavor, the Applicant Admitted Prior Art said scanning includes scanning available channels to detect radar signals (see Background of the invention of the current specification);

said indicating includes indicating the channel as occupied by a radar system, otherwise indicating the channel as available (see Background of the invention of the current specification); and

said selecting includes selecting a channel from a channel indicated as available within the larger gap at a higher frequency to reduce interference with the radar system (see Background of the invention of the current specification).

Therefore, it would have been obvious to a person or ordinary skill in the art at the time the invention was made to incorporate detecting radar signals and spread channel uniformly across the entire band as taught by the Applicant Admitted Prior Art to method of scanning and selecting channels as disclosed by Koohgoli as modified by Frixon for purpose of reducing the accumulated interference to radar and other services.

14. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Choi et al. (U.S.**

Patent # 7,206,840) (hereafter Choi) in view of **Sugar et al. (U.S. Patent # 7,248,604 B2)** (hereafter Sugar) in view of **Frixon (U.S. Patent # 5,138,456)** further in view of **Applicant Admitted Prior Art (Background of the Invention)**.

Consider **claim 22 as applied to claim 1 above**, Choi as modified by Sugar as modified by Frixon discloses the claimed invention except said scanning includes scanning available channels to detect radar signals; said indicating includes indicating the channel as occupied by a radar system, otherwise indicating the channel as available; and said selecting includes selecting a channel from a channel indicated as available within the larger gap at a higher frequency to reduce interference with the radar system.

In the same field of endeavor, the Applicant Admitted Prior Art said scanning includes scanning available channels to detect radar signals (see Background of the invention of the current specification);

said indicating includes indicating the channel as occupied by a radar system, otherwise indicating the channel as available (see Background of the invention of the current specification); and

said selecting includes selecting a channel from a channel indicated as available within the larger gap at a higher frequency to reduce interference with the radar system (see Background of the invention of the current specification).

Therefore, it would have been obvious to a person or ordinary skill in the art at the time the invention was made to incorporate detecting radar signals and spread channel uniformly across the entire band as taught by the Applicant Admitted Prior Art to method of scanning and

selecting channels as disclosed by Choi as modified by Sugar as modified by Frixon for purpose of reducing the accumulated interference to radar and other services.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

16. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Allahyar Kasraian whose telephone number is (571) 270-1772. The Examiner can normally be reached on Monday-Thursday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Pérez-Gutiérrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Allahyar Kasraian/
Examiner, Art Unit 2617

A.K./ak

/Rafael Pérez-Gutiérrez/
Supervisory Patent Examiner, Art Unit 2617

January 28, 2010